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Squamacidia janeirensis (Lichenes), Newly Found in Japan[1)]

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日本新産の地衣，トゲウロコイボゴケ（新称）[1)]

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Squamacidia janeirensis (Müll. Arg.) Brako (Bacidiaceae) is reported from Japan for the first time. This species has small squamulose thallus with numerous isidia and white fibrous prothallus.

Squamacidia Brako is a lichen genus recently separated from *Phyllopsora* Müll. Arg. by Brako (1989). The genus is characterized by a small squamulose thallus with elongate, cylindrical isidia, fibrous prothallus, biatorine apothecia and filiform, simple or septate spores. This genus includes only one species, *S. janeirensis* (Müll. Arg.) Brako and its variety, var. *endococcina* (Zahlbr.) Brako and shows pantropical distribution (Brako 1989). In the present paper we report the first finding of *S. janeirensis* from central and southern Japan. In Eastern Asia, this species has been recorded only from Mt. Arisan in China (Taiwan) and the Philippine Islands (Brako 1989, Zahlbruckner 1933).

Squamacidia janeirensis (Müll. Arg.) Brako, Mycotaxon **35:** 8, 1989. [Fig. 1]

Basionym: *Thalloidima janeirensis* Müll. Arg., Hedwigia **31:** 280, 1892. Type: Brazil, Rio de Janeiro, coll. Portella, s.n. (holotype in BM, isotype in G).

Synonym: *Phyllopsora stenosperma* Zahlbr., Feddes Repert. Spec. Nov. Reg. Veget. **33:** 44, 1933. Type: China, Taiwan (Formosa), Mt. Arisan, Toroyen, coll. Y. Asahina, no. 170 (holotype in W!, isotype in TNS!).

External morphology: Thallus squamulose, 0.75–1.0 mm in diameter, grayish green, irregularly incised. Isidia numerous, up to 1.5 mm long, 0.2 mm across, simple or rarely branched. Hypothallus distinct, fibrous, white. Apothecia biatorine, adnate, up to 1.5 mm in diameter, entire to irregularly undulate. Disc brown to blackish brown with paler margin, strongly convex at maturity, often divided into several parts by fissures or with small apothecia newly developing on the older one. Pycnidia not seen.

Anatomy: Thallus corticate only in upper side. Cortex type I sensu Swinscow and Krog (1981), i.e. composed of thin hyphae forming network. Hymenium 58–70 μm thick, pale yellow. Asci clavate, 8-spored. Paraphyses hyaline, branched and anastomosing. Spores 32–42 μm long, 2–3 μm thick, rounded at both ends, hyaline, simple or septate. Hypothecium dark brown. Exiple composed of hyaline, radiating hyphae, partly fibrous.

Chemistry: Thallus K– or faintly yellow, P–, C–, KC+ pale red, UV+; atranorin, lobaric acid and unidentified substances.

Specimens examined: Japan, Honshu, Aichi Pref., Minami-shidara-gun, Mt. Hôraiji, 200–360 m alt., on bark of *Cryptomeria japonica,* T. Okamoto 2245, 2318, 2320, 2326, 2497, 2498, 2509, 2511, 2512, 2515, 2517, 2518, 2819 and 2820; Shikoku, Kôchi Pref., Nankoku-shi, en route from Takimoto to Bishamon falls, 40 m alt., on bark of *Cryptomeria japonica,* M. Oshio 7516 and 7554. (All specimens are deposited in HIRO).

Range: Japan (Honshu, Shikoku), China (Taiwan), the Philippine Islands, Central and South America.

As the related species of *S. janeirensis,* two species of the genus *Phyllopsora, P. densiflorae* (Vain.) G. Schneider (= *Lecidea densiflorae* Vain.) and *P. haemophaea* (Nyl.) Müll. Arg. (= *Lecidea kiiensis* Vain.) have been known from Japan (Swincow and Krog 1981). However, these two *Phyllopsora* species have short spores about 10 μm while those of *S. janeirensis* are longer, over 30 μm. Moreover, both *Phyllopsora* species have reddish prothallus and can be easily distinguished from *S. janeirensis.*

The Japanese specimens examined constantly contain atranorin in addition to lobaric acid. While the former substance has not been known in *S. janeirensis* var. *janeirensis,* it has been reported in var. *endococcina* which has skyrin in the medulla and is distributed in neotropics (Brako 1989). Since the Japanese plants show no morphological differences with var. *janeirensis,* they should be regarded as a chemical variety of it.

Although we have confirmed only two localities of *S. janeirensis* in Japan, additional localities of it will possibly be found also in warm regions like Kii Peninsula or Kyushu like some tropical or subtropical lichens, e.g. *Dictyonema sericeum* (Sw.) Berk. (Asahina 1926, 1960; Sato 1957).

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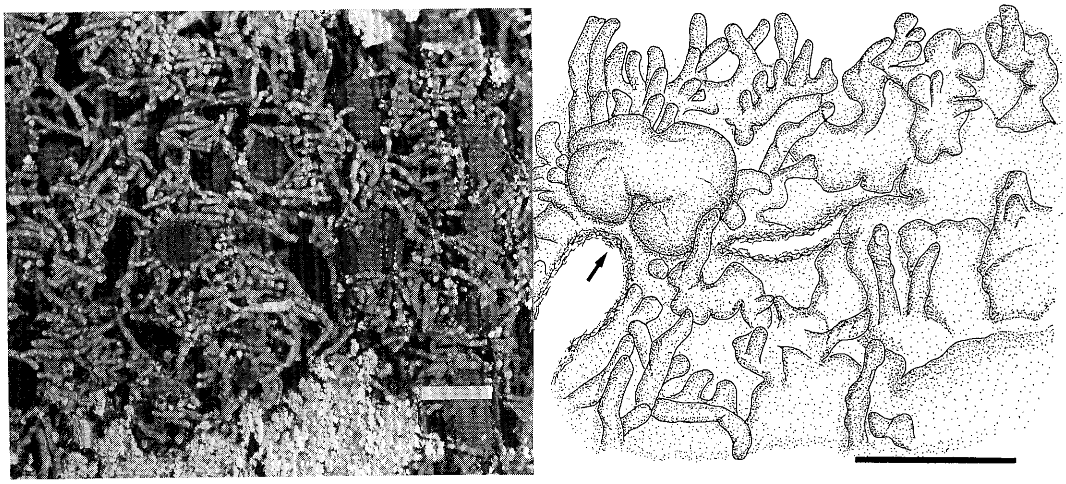

Fig. 1. *Squamacidia janeirensis* (Müll. Arg.) Brako. Left. Habit. Right. Apothecium (arrow) and isidia. (T. Okamoto 2802, HIRO). Scale bars = 1 mm.

for the correction of the English text.

Endnote

1) Contribution from the Phytotaxonomical and Geobotanical Laboratory, Hiroshima University, N. Ser. No. 409.

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要旨

愛知県鳳来寺山と高知県南国市から*Squamacidia janeirensis* (Müll. Arg.) Brako (=*Phyllopsora stenosperma* Zahlbr.) (トゲウロコイボゴケ, 新称) を日本新産として報告した. 本種は汎熱帯性の種で, 日本の近辺ではこれまで台湾の阿里山のみから知られていたが, 今回分布域が日本にまで延びていることが明らかになった.